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EXAMINER

HALIYUR, VENKATESH N

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/693,509	Applicant(s) STRASMAN ET AL.	
	Examiner Venkatesh Haliyur	Art Unit 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-109 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-109 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-109 are pending in the application.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The claimed invention in claims 106-109 is directed to non-statutory subject matter.

In claim 106, lines 1-2, recite the limitation as "An electronically readable medium having stored thereon computer readable code...." which fails to comply with the 101 interim guidelines set forth therein (please refer to pages 52-53 of the 101 interim guidelines).

In claims 107-109, lines 1-2, recite the limitation as "A computer readable medium having code embodied therein for causing an electronic device to perform the steps of:" which fails to comply with the 101 interim guidelines set forth therein (please refer to pages 52-53 of the 101 interim guidelines).

It is well established that a computer program product or a software product or computer readable code, per se is not a physical "thing" and does not define any structural and functional interrelationship between the computer

program code and the rest of the computer, which permits the computer program's functionality to be realized.

In order for a computer program or software instructions to be statutory it must be embodied (encoded) in a computer-readable medium capable of being executed by a computer.

In claim 106, the limitation "An electronically readable medium having stored thereon computer readable code..." is not clearly defined in the specification (please refer to para 0019-0023-0024) and without a clear definition for an electronically readable medium or a storage medium in the specification.

In claims 107-109 the limitation "A computer readable medium having code embodied therein..." is also not disclosed in the specification.

Thus, claims 106-109 is directed to non-statutory subject matter since the patent protection sought by the claimed invention is for the computer program in the abstract.

Appropriate corrections are required to claims without introducing any new matter to the disclosure.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Regarding claims 1,106,109, these claims recite the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. Appropriate corrections are required to these claims.

4. Claims 106-109 recites the limitation such as "computer readable code" or "computer readable medium" in line 1. There is insufficient antecedent basis for this limitation in the claims or in the specification. The specification discloses only an electronically readable medium but there is no mentioning of "a computer readable medium" or "a computer" or "a computer readable code" in the specification. Appropriate corrections are required to these claims.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-39, 54-91 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al [US Pat: 6,891,854].

Regarding claim 1, Zhang et al in the invention of "System and Method for Transporting a Compressed Video and Data Bit Stream Over a Communication Channel" disclosed a method for generating a multiplex of media streams (**Figs 2A-4, and Fig 7, col 6, lines 28-63**), the method comprising: receiving a set of media streams that comprises first type media stream components (**Video Bitstream 1 of Fig 7**) and second type media stream (**Data Stream of Fig 7**) components (**col 13, lines 59-67, col 14, lines 1-17**); applying a modification process (**item 704 of Fig 7**) that is not adapted to modify second type media stream components, such as to provide at least one modified first type media stream component (**col 14, lines 20-24**); and multiplexing (**item 706 of Fig 7**) at least the second type media stream components and the modified first type media stream components (**col 14, lines 25-37**).

Regarding claims 2, 55, Zhang et al disclosed wherein the second type media stream packets are encrypted (**only video data is encoded to be modified**) such as not to facilitate their modification (**col 5, lines 5-8**).

Regarding claims 3, 56, Zhang et al disclosed wherein the modification process involves lossy compression (**col 2, lines 28-34, Fig 2A**).

Regarding claims 4, 57, Zhang et al disclosed wherein the modification process involves lossless compression (**col 14, lines 18-20, Fig 2A**).

Regarding claims 5, 58, Zhang et al disclosed wherein the modification process involves altering a size of at least one media stream component (**col 10, lines 63-67 Fig 4**).

Regarding claims 6, 59-60, Zhang et al disclosed wherein the modification process involves altering a timing of transmission of at least one media stream component (**col 9, lines 7-27, Fig 4**).

Regarding claims 7, 61, Zhang et al disclosed wherein the step of multiplexing further comprises multiplexing non-modified first type media stream components (**CBR, col 11, lines 46-57**).

Regarding claims 8, 62, Zhang et al disclosed wherein the step of modifying comprises executing modification sessions in a periodical manner (**rate controller, item 512 of Fig 5, col 11, lines 47-54**).

Regarding claims 9, 63, Zhang et al disclosed wherein each modification session is associated with a group of media stream components that are received during a certain time period (**col 11, lines 61-65**).

Regarding claims 10, 64, Zhang et al disclosed wherein each modification session is associated with media stream components of a certain aggregate size (**col 11, lines 47-54**).

Regarding claims 11, 65, Zhang et al disclosed wherein each modification session is associated with a group of media stream components to be transmitted during a certain time period (**col 6, lines 42-59**).

Regarding claims 12, 66, Zhang et al disclosed wherein each modification session is associated with media streams components of the set of media streams that were not transmitted **(col 14, lines 20-27)**.

Regarding claims 13, 67, Zhang et al disclosed wherein at least one modification session includes modifying a size of at least one media stream component of the group, evaluating the size of the at least one modified non-encrypted media stream component, and determining whether additional modification is required **(col 14, lines 3-35)**.

Regarding claims 14, 68, Zhang et al disclosed wherein at least one modification session includes modifying a timing of at least one media stream component of the group, evaluating the timing of the at least one modified non-encrypted media stream component, and determining whether additional modification is required **(col 14, lines 28-38)**.

Regarding claims 15-16, 69-70, Zhang et al disclosed wherein the additional modification comprises modifying a non-modified non-encrypted media stream component of the group or re-modifying **(modification performs encoding and decoding process for Bitstreams)** a modified media stream component of the group and wherein at least one media stream of the set is partially encrypted **(col 4, lines 40-62)**.

Regarding claims 17, 71, Zhang et al disclosed further comprising determining at least one control parameter **(col 17, lines 4-11)**.

Regarding claims 18, 72, Zhang et al disclosed wherein the determination is followed by selecting an encrypted version of a media stream out of multiple distinct encrypted versions (**col 9, lines 35-65**).

Regarding claims 19, 73, Zhang et al disclosed wherein the distinct encrypted versions differ from each other by a parameter that is video quality, encryption level or size (**col 9, lines 48-50**).

Regarding claims 20, 74, Zhang et al disclosed wherein the distinct encrypted versions differ from each other by the manner that they were generated (**col 9, lines 52-57**).

Regarding claims 21, 75, Zhang et al disclosed wherein the determination is followed by altering an encryption of a media stream (**encoded media streams, col 10, lines 63-67**).

Regarding claims 22, 75, Zhang et al disclosed wherein the determination is followed by altering the modification process (**col 10, lines 54-60**).

Regarding claims 23, 77, Zhang et al disclosed further comprising assigning encryption priorities to media stream components and whereas encryption is altered in response to the at least one control parameter and the encryption priorities (**col 14, lines 18-34**).

Regarding claims 24, 78, Zhang et al disclosed wherein a media stream is represented by multiple layers and whereas the determination is followed by altering at least one layer, deleting one layer or adding a new layer (**col 15, lines 49-57, Fig 9**).

Regarding claims 25, 79, Zhang et al disclosed wherein a media stream is represented by multiple layers and whereas the determination is followed by altering the selection of layers that undergo encryption (**col 18, lines 41-48**).

Regarding claims 26-28, 80,82, Zhang et al disclosed further comprising assigning modification priorities to media stream components and determining at least one control parameter in response to the modification priorities and wherein the at least one control parameter is determined in response to an encryption scheme applied on media stream components (**col 18, lines 41-48**).

Regarding claims 29-30, 81, 83, Zhang et al disclosed further comprising assigning encryption priorities to media stream components and determining at least one control parameter in response to the encryption priorities (**col 14, lines 18-37**) and wherein the determination is responsive to the target bit rate, the bit rate of encrypted media stream components and of non-encrypted media stream components previously received (**col 14, lines 17-24**).

Regarding claim 31-32, 84, Zhang et al disclosed wherein the determination is responsive to the timing and size associated with received media stream components (**col 14, lines 3-35**) and wherein the step of modifying comprises selecting between encrypted media stream components and non-encrypted media stream components (**col 14, lines 17-24**).

Regarding claims 33-34, 85-86, Zhang et al disclosed wherein the step of selecting comprises analyzing at least one encryption indication associated with at least one media stream component (**col 9, lines 48-51**) and further comprising

assigning modification priorities to media streams and modifying media stream components in response to the modification priorities (**col 14, lines 24-32**).

Regarding claims 35-36, 87-88, Zhang et al disclosed wherein at least one media stream of the set is represented by multiple layers and at least a portion of at least one layer is encrypted and wherein the layers comprise a base layer and at least one supplemental layer (**col 15, lines 49-57**).

Regarding claims 37-38, 89-90, Zhang et al disclosed wherein the layers provide spatial scalability (**col 12, lines 65-67**) and wherein the layers provide temporal scalability (**col 2, lines 1-27**).

Regarding claims 39, 91, Zhang et al disclosed wherein the layers are generated by filtering (**col 12, lines 13-20**).

Regarding claim 54, Zhang et al disclosed an apparatus for generating a multiplex of media streams, the apparatus (**Fig 8**) comprising: an interface, for receiving a set of media streams that comprises first type media stream components and second type media stream components (**items 802-806 of Fig 8**); a statistical multiplexing unit (**item 808 of Fig 8**) for applying a modification process (**col 14, lines 38-42**), that is not adapted to modify second type media stream components, such as to provide at least one modified first type media stream component (**col 14, lines 62-67, col 15, lines 1-12**), and for multiplexing at least the second type media stream components and the modified first type media stream components (**col 15, lines 13-17**).

7. Claims 40-53, 92-109 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al [US Pat: 6,795,506].

Regarding claims 40, 92, Zhang et al disclosed a method for partially encrypting a media stream (**item 60 of Fig 3B**), the method comprising the steps of: receiving a media stream (**col 13, lines 3-13**); converting the media stream to multiple layers (**col 15, lines 36-51, Fig 4A**); and encrypting at least a portion of at least one layer (**encoding process of bitstreams, col 15, lines 52-55**).

Regarding claims 41, 93, Zhang et al disclosed wherein the step of encrypting comprises encrypting a portion of at least one layer while not encrypting at least one other layer (**col 15, lines 39-51**).

Regarding claims 42, 94, Zhang et al disclosed wherein the multiple layers comprise base layer (**elementary layer**) and at least one quantized layer (**transport layer, col 15, lines 39-51, Fig 4A**).

Regarding claims 43, 95, Zhang et al disclosed wherein the multiple layers comprise a base layer (**elementary layer**) and at least one supplemental layer (**packetized elementary layer, col 15, lines 45-51, Fig 4A**).

Regarding claims 44-45, 96-97, Zhang et al disclosed wherein the multiple layers provide spatial scalability and wherein the layers provide temporal scalability (**col 8, lines 4-14**).

Regarding claims 46-47, 98-99, Zhang et al disclosed wherein the layers provide various levels of filtering for partially encrypting a media stream, the method comprising

the steps of: receiving multiple layers that represent a media stream and encrypting at least a portion of at least one layer (**col 15, lines 39-51, Fig 4A**).

Regarding claims 48-49, 100-101, Zhang et al disclosed wherein the step of encrypting comprises encrypting a portion of at least one layer while not encrypting at least one other layer and wherein the multiple layers comprise a base layer and at least one quantized layer(**transport layer, col 15, lines 39-51, Fig 4A**).

Regarding claims 50-51, 102-103, Zhang et al disclosed wherein the multiple layers comprise a base layer (**elementary layer**) and at least one supplemental layer (**paketized elementary layer**) and wherein the multiple layers provide spatial scalability (**col 8, lines 4-14, Fig 4A**).

Regarding claims 52-53, 104-105, Zhang et al disclosed wherein the layers provide temporal scalability and wherein the layers are generated by filtering (**col 15, lines 39-51, Fig 4A**).

Regarding claim 106,109, Zhang et al in the invention of "Methods and Apparatus for Efficient Scheduling and Multiplexing" disclosed an electronically readable medium having stored thereon computer readable code to permit a computer to affect a method for generating a multiplex of media streams (**Fig 7, col 28, lines 2-30**), the method comprising: receiving a set of media streams that comprises first type media stream components and second type media stream components (**item 652 of Fig 6, col 27, lines 5-13**); applying a modification process (**items 654-664 of Fig 6**) that is not adapted to modify second type media stream components, such as to provide at least one modified first type media stream component (**col 27, lines 14-20**); and multiplexing

(item 668 of Fig 6) at least the second type media stream components and the modified first type media stream components **(col 27, lines 21-38)**.

Regarding claim 107, Zhang et al disclosed a computer readable medium having code embodied therein for causing an electronic device **(item 60 of Fig 3B)** to perform the steps of: receiving a media stream **(col 13, lines 3-13)**; converting the media stream to multiple layers **(col 15, lines 36-51, Fig 4A)**; and encrypting at least a portion of at least one layer **(perform encoding process for bitstreams, col 15, lines 52-55)**.

Regarding claim 108, Zhang et al disclosed a computer readable medium having code embodied therein for causing an electronic device **(item 60 of Fig 3B)** to perform the steps of: receiving a multiple layers that represent a media stream and encrypting at least a portion of at least one layer **(perform encoding process of bitstreams, col 15, lines 36-55, Fig 4A)**.

Conclusion

8. Any inquiry concerning this communication or earlier communications should be directed to the attention to Venkatesh Haliyur whose phone number is 571-272-8616. The examiner can normally be reached on Monday-Friday from 9:00AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached @ (571)-272-7884. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (571)-272-2600 or fax to 571-273-8300.

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9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

Venkatesh Haliyur

Patent Examiner

Wh
1/31/08

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